

### **REMARKS**

Claims 1-23 are pending in this application. In the December 18, 2003 Office Action, claims 22 and 23 stand rejected under 35 U.S.C. § 112, first paragraph. Claims 1-10 and claims 22-23 stand rejected under 35 U.S.C. § 102(e). Claims 12-19 stand rejected under 35 U.S.C. § 103(a). Applicants respectfully traverse these rejections. For the reasons set forth below, Applicants believe the claims are in condition for allowance and notice to that effect is earnestly solicited.

### **CLAIM AMENDMENTS**

Claim 1 has been amended to recite:

presenting the test item to the respondent in a first window on the first display device, the first display device having a first resolution, the first window including a number of pixels in a first and a second direction, wherein additional pixels may be viewed by scrolling subject matter through the window;

presenting the test item to the respondent in a second window on a second display device, the second display device having a second resolution different from the first resolution, the second window including substantially the same number of pixels in a first direction as the first window and including substantially the same number of pixels in a second direction as the first window;

wherein substantially the same amount of scrolling is required to view the question portion in the window on the first display device and on the second display device despite the different resolutions of the first and second display devices.

This amendment is supported in claim 12 as originally filed and in the specification at page 3, lines 12-13 ("The same number of pixels is used to display the test item on the first display and the second display"); page 7, lines 8-16 ("When a test item is presented on display devices having different resolutions and/or display viewing areas, the same number of pixels may be used to display the test items on each display").

Claims 12 has been amended to more clearly define the claimed subject matter.

Claim 22 has been amended to provide proper antecedent basis for "the display device."

Claim 22 has also been amended to recite:

presenting the test item image to the respondent at the first workstation in a window using a predetermined number of pixels and a predetermined aspect ratio . . .

wherein a substantially uniform amount of scrolling is required to view the test item, regardless of the parameters of the display device.

This amendment is supported at page 11, lines 5-7 ("Because the image size and aspect ratio are controlled by the pixel-based definition of the test item image, a graphic tool can be overlaid on the image for measuring portions of the image"). See also page 3, lines 12-13 and page 7, lines 8-16.

No new matter has been added.

**CLAIM REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH.**

Claims 22-23 stand rejected under 35 U.S.C. § 112 for lacking antecedent basis for "the display device." Applicants have amended claim 22 to provide proper antecedent basis. Applicants submit that claim 22 as amended and dependant claim 23 comply with 35 U.S.C. § 112.

**CLAIM REJECTIONS UNDER 35 U.S.C. § 102(e)**

The Examiner rejected claims 1-10 and 22-23 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,175,384 to Loiacono. Applicants respectfully traverse this rejection.

Independent claim 1 has been amended to recite:

presenting the test item to the respondent in a first window on the first display device, the first display device having a first resolution, the first window including a number of pixels in a first and a second, wherein additional pixels may be viewed by scrolling subject matter through the window;

presenting the test item to the respondent in a second window on a second display device, the second display device having a second resolution different from the first resolution, the second window including substantially the same number of pixels in a first direction as the first window and including substantially the same number of pixels in a second direction as the first window;

wherein substantially the same amount of scrolling is required to view the question portion in the window on the first display device and on the second display device despite the different resolutions of the first and second display devices.

At least these limitations are not taught or suggested by Loiacono. For example, Loiacono at least fails to teach or suggest "the first window including a number of pixels in a first and a second direction . . . the second window including substantially the same number of pixels in a first direction as the first window and including substantially the same number of pixels in a second direction as the first window . . . wherein substantially the same amount of scrolling is required to view the question portion in the window on the first display device and on the second display device despite the different resolutions of the first and second display devices."

Claim 22 as currently amended recites:

presenting the test item image to the respondent at the first workstation in a window using a predetermined number of pixels and a predetermined aspect ratio; and overlaying a response control over the test item image, the test item image and response control together defining a test item;  
wherein a substantially uniform amount of scrolling is required to view the test item, regardless of the parameters of the display device.

These limitations are not taught or suggested by Loiacono. For example, Loiacono at least fails to teach or suggest "presenting the test item image to the respondent at the first workstation in a window using a predetermined number of pixels and a predetermined aspect ratio."

Applicants submit that claims 1-10 and 22-23 fully comply with 35 U.S.C. § 102(e).

**CLAIM REJECTIONS UNDER 35 U.S.C. § 103(A)**

Claims 12-19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Loiacono in view of U.S. Patent No. 6,268,855 to Mairs. The Office Action did not explicitly set forth a basis for rejecting claim 11. For the purpose of responding to this Office Action, Applicants will consider claim 11 rejected under 103(a).

Applicants respectfully traverse these rejections and request reconsideration. Applicants submit that the claims are in compliance with § 103, and a notice of allowance is earnestly requested.

**Discussion of Claims 11-19**

Applicants respectfully submit that the cited references do not teach or suggest the display of a test item using uniform amounts of scrolling on multiple displays having different resolutions.

Claim 11 recites:

displaying a question portion in an image format in a window . . . wherein the same amount of scrolling is required to view the question portion in the window on the first workstation display device and the other workstation display device, despite the different display resolutions.

Claim 12 recites:

displaying a first test item on a first display having a first resolution, the first item being displayed in a window having vertical and horizontal parameters defined in pixels . . . ; and

displaying the first test item on a second display having a second resolution larger than the first resolution, the first item being displayed in a window having vertical and horizontal parameters that are substantially the same as the parameters used to display the item on the first device, wherein substantially the same amount of scrolling is needed to display the first test item on the first display and on the second display.

Claim 14 recites:

displaying the test item to a first respondent on a first workstation having a first display with a first resolution and displaying the test item to a second respondent on a second workstation having a second display with a second resolution, the first resolution being higher than the second resolution, wherein the same amount of scrolling is required to view the test item on the first display and the second display.

Loiacono

Loiacono is directed to a computerized system for efficiently transforming educational materials composed of questions and answers into an on-line computer interactive form. See Loiacono Abstract.

Mairs

Mairs is directed to a method and system for simulating a high-resolution display of a first computer on a low-resolution display of a second computer using viewport scrolling. See Mairs Abstract. The Mairs specification describes how this is accomplished:

Desktop scrolling simulates the higher resolution desktop by generating a virtual desktop with the same resolution as the higher resolution desktop. For example, if the higher resolution is 1024 by 768 pixels and the lower resolution is 640 by 480 pixels, then Share System of the computer system with the 640 by 480 pixel resolution desktop simulates a 1024 by 768 pixel virtual desktop. However, only a 640 by 480 pixel area of the virtual desktop can be displayed at one time on the computer system with the lower resolution desktop. Consequently, the Share System of the computer system with the lower resolution desktop simulates a 640 by 480 pixel viewport into the virtual desktop. The Share System automatically scrolls the viewport as the user of the computer system with the lower resolution desktop moves the cursor (i.e., mouse pointer or insertion point) towards an edge of the viewport (i.e., the display). In this way, a user of the computer system with the lower resolution desktop can view the entire higher resolution desktop, albeit only a portion at a time. By using desktop scrolling, the Share System avoids having to scale the output data to accommodate the different resolutions.

Mairs col. 15, lines 21-41.

The Office Action explained the rejection of claims 12-19 in view of Loiacono and Mairs, relying upon Mairs to teach the "uniform scrolling" aspect of Applicant's claims:

Loiacono does not expressly disclose wherein the window includes a defined number of pixels in each direction, and wherein additional pixels may be viewed by scrolling subject matter through the window, and wherein the same amount of scrolling is required . . . . However, Loiacono teaches computer images in a bitmap format . . . a format which can be used with a variety of screen resolutions. . . . Mairs teaches the concept of creating the same resolution for two computer systems with different resolution. . . . it would have been obvious . . . .

Office Action pp. 5-6.

Applicants respectfully traverse this rejection. Applicants acknowledge that Mairs might "teach[ ] the concept of creating the same resolution for two computer systems with different resolution" as asserted by the Office Action, but Applicants respectfully disagree with the suggestion that this concept obviates Applicants claims. Applicants' claims are not related to creating the same resolution, as suggested by the Office Action, but rather concern creating uniform scrolling, which is not taught or suggested by Mairs.

Mairs and Loiacono fail to teach the problem of non-uniform scrolling in standard assessments. Applicants submit that under normal circumstances users generally prefer to maximize the use of screen area to facilitate easy viewing of textual or graphical material. Fig. 2 of Loiacono and Fig. 31 of Mairs for example each show the familiar icon in the upper right hand corner of the window that "maximizes" the window on the display. Applicants claimed method departs from the typical practice as illustrated by Mairs and Loiacono of maximizing use of screen area. Instead, Applicants utilize only a portion of available screen area on higher-resolution displays, sacrificing some screen area for some viewers in pursuit of the alternative objective of scrolling uniformity. If some test takers need to scroll more than others to view a test item, those test takers will be at a disadvantage. Claims 11-19 solve this problem by presenting the test items in a manner that requires test takers at different display devices to scroll the same amount to view the test item.

Neither Mairs nor Loiacono nor their combination teach the method steps mentioned above for claims 11, 12, and 14. Claims 11-19 are patentable at least for this reason.

Mairs also teaches away from Applicants' claimed methods. Mairs addresses the problem of displaying high-resolution images on a lower-resolution display. Mairs' solution is to present a viewport on the lower-resolution display that contains a smaller number of pixels than a viewport on a higher-resolution display. Mairs compensates for the pixel discrepancy by scrolling the low-resolution display: "At any one time, the user of the low-resolution display sees only a portion of the high resolution display but can scroll the portion through the entire high-resolution display." Mairs Abstract.

Mairs thus teaches the use of more extensive scrolling to view higher-resolution material on a lower-resolution display. Applicants' claims, in contrast, seek to reduce or eliminate scrolling discrepancies. Mairs thus teaches away from Applicants' claimed method because Mairs accommodates resolution discrepancies by varying scrolling parameters, which works against Applicant's goal of reducing or eliminating scrolling discrepancies.

#### Claims 1 and 22

Applicants also note that claim 1 has been amended to recite first and second windows including "substantially the same number of pixels" wherein "substantially the same amount of scrolling is required to view the question portion in the window on the first display device and on the second display device despite the different resolutions of the first and second display devices." Mairs and Loiacono at least do not teach or suggest these limitations.

Claim 22 has been amended to recite "using a predetermined number of pixels and a predetermined aspect ratio . . . wherein a substantially uniform amount of scrolling is required to

view the test item regardless of the parameters of the display device." Mairs and Loiacono at least do not teach or suggest these limitations.

Accordingly, it is believed that the claims fully comply with § 103(a). Applicants respectfully request reconsideration and withdrawal of these rejections.

**SUMMARY**

In summary, each of claims 1-23 are in condition for allowance and a notice of allowance is respectfully requested.

Respectfully submitted,  
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